

L. Lloyd (T.M.)

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Asheville and the Mountains  
of North Carolina in the  
Climatic Treatment of  
Phthisis.

BY

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SOME EVIDENCE RELATING TO  
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A VISIT to the mountains of western North Carolina, made by Dr. Avery Segur, of Brooklyn, N. Y., and the reporter, so impressed them with the natural sanitary advantages of this region that they determined to make further inquiry.

Very valuable reports were found based upon the personal experience and observations of Dr. J. W. Gleitsmann, formerly proprietor of the "Mountain Sanitarium for Consumption" at Asheville, N. C., now of New York city, of Professor Stanford E. Chaillé, of New Orleans, La., and Dr. H. O. Marcy, of Boston, Mass. Knowing that many cases had been sent to this section, and finding comparatively few published reports, they instituted a clinical inquiry by addressing a circular letter and questions to nearly three hundred prominent physicians in the large cities.

Western North Carolina, of which Asheville is the center, embraces an elevated expanse of 6,000 square miles, with a general altitude of 2,000 feet. This region, trian-



gular in outline, 200 miles in length from north to southwest, with a varying breadth of 15 to 65 miles, lies between the Blue Ridge and Smoky ranges, and is filled with cross-chains of mountains, mountain spurs, and isolated hills. It presents a most irregular surface, a sea of mountain-peaks ranging from 3,000 to 6,700 feet in height. The Alleghanies here attain their most lofty, rugged, and striking development. There are between 60 and 70 peaks over 6,000 feet high. Mount Mitchell, 6,711 feet above sea-level, is the loftiest summit east of the Rocky Mountains. The Blue Ridge is the water-shed of the system; "its inner slope throughout the entire length, as compared with the outer slope, is more gentle in its descent, heavily wooded, and diversified with clearings. The Smokies present similar characteristics, richly wooded descents toward the central valley, rocky and sterile fronts toward Tennessee." The geological formation is of the oldest, and the water has a purity and softness seldom equaled. There are many mineral springs which remain undeveloped. There are six great valleys, with tortuous configuration, separated by intervening ranges, each drained by one of the rivers which cut asunder the Smoky range of mountains. The mountains are all covered with timber, which is remarkable for the great variety of species and for the size attained, especially on the higher slopes. The soil is rich, yielding, where cultivated along the rivers and in many mountain coves, a great variety of fruits and grains of fine quality. Tall, rich grass and nutritious weeds grow on many of the summits. To the botanist and lover of forest-trees this region is a perfect mine. Regarding its attractiveness, those who have traveled much and visited it generally concur in the opinion "that there is no mountain region in the eastern United States which equals in beauty and grandeur this sublime section of North Carolina." It abounds in roman-



tic streams, waterfalls, luxuriant forests, majestic mountain heights, cliffs, valleys of exquisite beauty, and quaint villages and settlements. There is such a small area cleared and under cultivation that the general impression on the traveler is that of a mountain wilderness. Hence the purity of its air. The clearness of the atmosphere on bright sunshiny days is remarkable, rendering very appropriate the appellation, "Land of the sky." No lakes or swamps are found. The freedom of this mountain region from malaria seems to be established by competent testimony. Mountain climbing affords an attractive work, and will clear the system of this tenacious poison. The purity of the air in this respect, and with an abundant vegetation, seems to point to a remarkable drainage of the soil, natural to the plateau, since so little of it is cleared and cultivated. Hence the composition of the atmosphere in respect to moisture is favorable to the cure of phthisis. Asheville is splendidly situated on rising ground 250 feet above the waters of the Swannanoa, near its junction with the French Broad River, at the foot-hills of the Black Mountain chain, 2,250 feet above sea-level. The population, according to the United States Census of 1880, was 5,868 for the township, and 2,616 for the town itself. While surrounded on all sides by mountain-ranges, Asheville is nevertheless not shut in by them, in every direction the more lofty ranges or peaks being at least ten miles distant. This insures an abundance of sunshine at all hours of the day, and an absence of "down draughts" of cold night air, characteristic of places lying in a deep, narrow valley at the foot of overhanging slopes, and contributes much toward the comparative equality and comparative dryness of atmosphere of this climate. Its environs are beautiful, with many attractive drives to local places of interest and points commanding views of billowy hills and distant amphitheatre of mount-

ains. From its central position excursions can conveniently be made by rail, carriage, and especially by horseback, to all parts of this mountain region. The mean average temperature, taken for thirteen years (1867 to 1879), was: Spring,  $53.70^{\circ}$ ; summer,  $70.66^{\circ}$ ; autumn,  $53.96^{\circ}$ ; winter,  $38.30^{\circ}$ ; and for the year,  $54.10^{\circ}$ . "At about  $35^{\circ} 30'$  latitude, Asheville has the summer temperature of St. Paul, Minn.,  $45^{\circ}$ , and the winter temperature of Fayetteville, Ark.,  $36^{\circ}$  latitude. . . . During a period of eight years (1867 to 1875) the thermometer but twice rose above  $88^{\circ}$ , and but three times fell below  $3^{\circ}$ ." The extremes were a maximum of  $90^{\circ}$  and a minimum of  $1^{\circ}$ .

*Table showing winter temperatures, abstracted, obtained through the courtesy of Dr. J. W. Gleitsmann, of New York, by whom the observations were made.*

OBSERVATIONS.	Dec.	Jan.	Feb.	Mch.	Year.	Remarks.
	Deg.	Deg.	Deg.	Deg.	Deg.	
Mean temperature...	37.80	37.70	39.40	45.50	54.10	Observations of 13 years (1867-'79).
Mean maximum temperature (self-registering thermometer).....	44.74	44.27	46.08	60.68	64.30	} Observations of 2 years (1878-1879).
Mean minimum temperature.....	30.79	27.64	29.92	39.53	45.98	
Absolute maximum temperate.....	65.00	69.20	71.50	74.50	94.00	} Observations of 4 years (1876-1879).
Absolute minimum temperature.....	4.50	-6	14.00	12.00	-6	
Mean relative humidity	71.92	67.13	64.97	59.51	70.32	Observations of 4 years (1876-'79).
Average rain-fall (in.)	3.03	2.62	3.62	4.30	42.55	Observations of 11 years (1869-'79).
Number of fair and clear days.....	18	17	16	25	259	Observations of 2 years (1878-'79).

To indicate the severest temperature ever likely to be experienced in Asheville, the following points were noted

from a temperature chart (prepared by D. S. Watson) of last winter, the coldest throughout the South for very many years. In January there were five days in succession with the lowest temperatures varying from  $12^{\circ}$  to  $-1^{\circ}$ . In February the lowest temperatures were again on successive days  $8^{\circ}$ ,  $-3^{\circ}$ ,  $+10^{\circ}$ , the average being much higher. During January and February there were twenty-seven clear days and fifteen partially clear. There were several light snow-storms, and two each eight inches deep. From our examination of the records, including that of last summer, it can fairly be said that this region has one of the lowest summer temperatures, and that few places are found on the eastern side of this continent combining such coolness of summer with comparatively mild winter. "During a period of ten years the highest temperature was only twice  $88^{\circ}$  and once  $90^{\circ}$ . . . . The diurnal ranges of the thermometer are very small when compared with the high regions of the West." The average annual rain-fall during eleven years (1869 to 1879) was 42.55 inches. The "conditions for production of ozone are present, abundance of vegetation, of water, of electric tension, and great evaporation."

#### TESTIMONY.

*Q. 1.* How many patients have you known to be sent to Asheville, N. C., for consumption?

*Q. 2.* Please give names and addresses of physicians sending them. "I have sent about thirty to this region; the majority went to Asheville."—Dr. H. O. Marcy, Boston, Mass. "Perhaps thirty or forty sent by myself."—Dr. Edgar Holden, Newark, N. J. "A great many, but can not give number."—Dr. R. A. Kinloch, Charleston, S. C. "'Three,' sent by Dr. C. A. Folsom, Boston, Mass. 'Several hundred certainly,' sent by Drs. Loomis (New York), Marcy (Boston), Da Costa (Philadelphia), Donaldson (Baltimore), Davis (Chicago), and other prominent physicians of the large cities."—Dr. Wardlaw McGill



and Dr. S. W. Battle, associate practicing physicians of Asheville, N. C. "‘I treated myself 136 patients at Asheville between 1875 and 1879,’ sent by Drs. Loomis, L. Conrad, George G. Wheelock (New York), William Pepper, J. Solis-Cohen (Philadelphia), E. Holden (Newark), H. J. Bowditch, F. I. Knight (Boston), A. Y. P. Garnett (Washington), J. B. Gaston (Montgomery, Ala.).”—Dr. J. W. Gleitsmann, formerly proprietor of a sanitarium at Asheville, now of New York city. "One."—Reported and sent by Dr. Thomas F. Rochester, of Buffalo, N. Y. "One."—Dr. S. D. Kennedy, New Orleans, his own case, reported through kindness of Dr. P. B. McCutcheon. "I have only the record of one case sent to Asheville, though I have directed several to go there from the Adirondacks this fall."—Dr. E. D. Ferguson, Troy, N. Y.

*Q. 3. (a)* In your experience, what are the most favorable months for consumption in the climate of Asheville? *(b)* and what are the most unfavorable? "*(a)* Autumn; *(b)* early spring."—Dr. H. O. Marcy. "I have always sent during winter."—Dr. E. Holden. "My observations confined to summer and fall."—Dr. R. A. Kinloch. "*(a)* May to June; *(b)* February and March."—Dr. Folsom. "*(a)* From April to December inclusive; *(b)* February and March, by reason of the roads more especially rather than that of the atmosphere."—Dr. McGill and Dr. Battle. "*(a)* Early spring until July, September to December; *(b)* January and February."—Dr. Gleitsmann. "*(a)* May to October; *(b)* December to May."—Dr. S. D. Kennedy. "*(a)* Summer and fall; *(b)* early spring."—Dr. J. A. Reagen, Weaver-ville, near Asheville, N. C.

*Q. 4.* What length of time have you known patients to remain with benefit? "Three years; met several who had lived many years. Settled because of lung troubles."—Dr. Marcy. "Usually three months."—Dr. Holden. "Have known disease apparently averted, and persons to remain there most of their time for many years."—Dr. Kinloch. "Two years."—Dr. Folsom. "Indefinitely."—Dr. McGill and Dr. Battle. "I know quite a number of people who have settled permanently in Asheville, and regained and retained thereby their health."—Dr. Gleitsmann. "Eighteen months, after having been in Rocky Mount-



ains for six months."—Dr. S. D. Kennedy. "For several years."—Dr. J. A. Reagan. "One of my patients was so much benefited that he left his New York position and bought a farm near Asheville, where he still lives in perfect health, and has done so for five or six years."—Dr. F. W. Rockwell, Brooklyn.

*Q. 5.* How many patients with incipient phthisis have recovered? "Too early to say positively; several seeming cures."—Dr. Marcy. "Many seemed well and subsequently died; a very few remain well."—Dr. Holden. "We may safely say a dozen under our very eyes."—Drs. McGill and Battle. "Of my 136 patients, 86 had incipient phthisis, 64 of whom improved."—Dr. Gleitsmann. "One."—Dr. S. D. Kennedy. "Have sent several cases of incipient or pronounced phthisis (in early stages) to Asheville, and always with good results."—Dr. F. W. Rockwell. "All the sick whom I have ever known sent to that section have improved except one."—Dr. Stanford E. Chaillé. "None in my practice of thirty-five years."—Dr. J. A. Reagan.

*Q. 6.* Have you known patients apparently cured in Asheville to have a relapse and die soon after leaving? If so, how many? "None of my sending."—Dr. Marcy. "No; but some failed to improve, and ran down rapidly upon return."—Dr. Holden. "No."—Dr. Folsom. "More than one. Have known of several who have tried to live elsewhere, but were compelled to return."—Dr. McGill and Dr. Battle. "No, not soon after. Of my patients, none within one year."—Dr. Gleitsmann. "The case improved the first winter, but would return to Troy to spend the summer, to be taken with acute extension on the eve of his proposed return, and a rapidly fatal issue."—Dr. E. D. Ferguson. "Very few."—Dr. J. A. Reagan.

*Q. 7.* In what stages of phthisis have you seen improvement? "Early stages."—Dr. Marcy. "The early stages of fibroid disease, first and second of strumous phthisis."—Dr. Holden. "Rather late in one; moderately late in one; so late that it seemed almost useless in one, and he has improved the most."—Dr. Folsom. "A large proportion of incipient phthisis are benefited."—Dr. McGill and Dr. Battle. "In the first and second stages; in the third stage (hectic, cavities), in only two cases."—Dr. Gleitsmann. "First."—Dr. S. D. Kennedy. "Most

marked in first and second stages, but known improvement in third stage, and life prolonged."—Dr. J. A. Reagan.

*Q. 8.* What effects have you noted upon the following symptoms? Dr. Folsom reports: "Loss of appetite and dyspepsia, three improved; diarrhœa, not a symptom; pharyngeal catarrh, two improved; bronchitis, expectoration, harassing cough, night-sweats, and emaciation, three improved; not a symptom in the others." Dr. McGill and Dr. Battle report: "Loss of appetite and dyspepsia generally improved; diarrhœa, negative effect; pharyngeal catarrh and bronchitis generally improved; expectoration lessened almost always; harassing cough generally lessened; in night-sweats, emaciation, and hæmoptysis, improvement only noted with that of other symptoms." Dr. J. A. Reagan: "Appetite and dyspepsia are improved; diarrhœa, pharyngeal catarrh, bronchitis, expectoration, nearly all improved; harassing cough all improved; night-sweats, emaciation, and hæmoptysis, nearly all improved." Dr. S. A. Kennedy: "Appetite, bronchitis, expectoration, harassing cough, night-sweats, and emaciation all improved in one case."

*Q. 9.* Have you known of patients injuriously affected by a sojourn in Asheville? If so, how many, and under what circumstances of stage of disease, complications, seasons of the year, etc.? "No; because I have sent only selected cases."—Dr. Holden. "No."—Dr. Kinloch. "No."—Dr. Folsom. "We fail to recall any cases where its injurious effects were directly traceable to climatic influences."—Dr. McGill and Dr. Battle. "Of 136 patients, 71 improved; the balance of 65 did either not improve or grew worse."—Dr. Gleitsmann. "This one (exception referred to in Dr. C.'s statement, classed under Query 5), contrary to my views, remained in the town of Asheville during the summer, where it is very dusty."—Dr. S. E. Chaillé. "No."—Dr. J. A. Reagan.

*Q. 10.* How many cases of phthisis have you known to originate in the vicinity of Asheville? If any, how many were hereditary? How many were acquired? "It is said that phthisis has originated here. It is claimed that it is not hereditary here, and when it has occurred it is supposed to be due to want of proper food and to bad hygienic surroundings."—Dr.

McGill and Dr. Battle. "None to my personal knowledge."—Dr. Gleitsmann. "Originating in vicinity of Asheville, 'ten,' 'all' hereditary; 'none' acquired."—Dr. J. A. Reagan.

Q. 11. How many subjects of acute pneumonia and bronchitis originating in Asheville and vicinity have you known to become phthisical? "We recall one instance; in this the disease was arrested and the recovery complete."—Dr. McGill and Dr. Battle. "None to my knowledge."—Dr. Gleitsmann. "None."—Dr. J. A. Reagan.

Q. 16. Is the climate generally conducive to sleep? "I think so."—Dr. Marcy. "Yes."—Dr. Kinloch. "At Asheville, yes, in my experience."—Dr. Folsom. "Decidedly."—Dr. McGill and Dr. Battle. "Yes."—Dr. Gleitsmann. "Yes."—Dr. S. D. Kennedy. "Yes."—Dr. F. Peyre Porcher, Charleston, S. C. "Yes."—Dr. J. A. Reagan.

Q. 17. Have you known of patients visiting Asheville or vicinity contracting malarial or typhoid fevers, or other diseases? "Diarrhœa and dysentery, several."—Dr. Marcy. "There has been a complaint which seems well founded that the water-supply is bad. . . . Typhoid fever often met with in all this mountain climate, more frequently formerly than now."—Dr. Kinloch. "No; I should think there might be typhoid, unless they clean up."—Dr. Folsom. "Never malaria, typhoid occasionally."—Dr. McGill and Dr. Battle. "Malaria is seldom, but not unknown in western North Carolina."—Dr. Gleitsmann. "Typhoid fever very common in Hendersonville, N. C., which is much resorted to. My family have often gone there for change and cool climate. Free from malaria, as is all that mountain region. Typhoid is not uncommon. I think the typhoid fever of Flat Rock all owing more to bad hygienic surroundings than to climate. *Malaria nil*. This mountain plateau has one of the most delightful climates in the world."—Dr. F. Peyre Porcher. "We have no malaria in this mountain section."—Dr. J. A. Reagan.

Under "*additional remarks*," Dr. McGill and Dr. Battle say that "the climate is dry and tonic, and invigorating: elevation and atmospheric dryness are its strong points. Asthma is al-



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most uniformly benefited here. Hay fever usually mitigated, and occasionally, in some instances, immunity is enjoyed." Dr. J. A. Reagan remarks: "I have been practicing regularly at Weaversville, eight miles north of Asheville, for over thirty years. It is the same height as Asheville. I have not known a single case of consumption in this plateau of some ten miles. There have been a few cases on the river and creeks." Dr. Pepper writes us (in answer to our circular letter): "I regret extremely that the excessive pressure of my business makes it impossible to answer your queries as to Asheville, especially because I have sent a great many patients there during a long series of years. The results are generally favorable to it as a health resort, and I doubt not that, with improving facilities and accommodations there, still better results will be obtained in the future." He again writes, in reply to a special query regarding his views of the most favorable months at Asheville: "I have had much more experience with the climate of Asheville during the summer and fall months up to Christmas. The limited number of observations I have as to Asheville as a winter resort have not been so favorable, but it has been almost impossible until recently to get good accommodations and food there in winter." Not having received any statistical statement of results from Dr. A. L. Loomis, we quote from his recent work ("Practical Medicine," 1885, p. 206): "My most decidedly beneficial and permanent results (when the evidences of consolidation were present in catarrhal phthisis) have been obtained in Asheville, N. C., in New Mexico, and in the Adirondack region of New York State." Dr. John T. Metcalfe, New York, kindly writes that he has known "very few" patients to be sent to Asheville for consumption. In his experience, late spring, summer, and autumn are the most favorable, and early spring and late winter the most unfavorable seasons. Dr. S. E. Chaillé, New Orleans, in his pamphlet, "The Mountain Sanitarium for Consumptives at Asheville, N. C.," 1878, gives very interesting reports from Dr. J. B. Gaston, Montgomery, Ala., who sent five patients to Dr. Gleitsmann's sanitarium, and all were improved; and Dr. E. P. Gaines, Mobile, Ala., who sent four patients to the sanitarium, where all markedly improved, except one case

diagnosed "miliary tuberculosis." Dr. Chaillé further reported (*ibid.*) very beneficial effects upon one of his own patients from a short sojourn at Dr. Gleitsmann's sanitarium. "I have always considered the region of Asheville, N. C., as a particularly favorable climate for invalids, either in winter or summer, and have personal knowledge of cases who have been sent there receiving great benefit, especially those of cough and debility threatening phthisis."—Dr. W. Elmer, Trenton, N. J. Dr. F. W. Owen, of Morristown, N. J., writes he has seen improvement in one case sent to Asheville in the first stages of phthisis. Dr. Thomas F. Rochester, of Buffalo, N. Y., reports that he sent one patient to Asheville. The patient went there in the fall and died there the next spring. He had pulmonary and laryngeal phthisis in the second stage. Dr. A. J. C. Skene, Brooklyn, N. Y., replies: "I have one impression (a general one), based upon observation, viz., that of the patients of mine who have spent the winter South, those who were in North Carolina have made the best progress." We are indebted to Dr. Irving W. Lyon, of Hartford, Conn., for the following extract from a letter written, at his request, by Mr. Henry Rogers, an educated gentleman (lawyer) of New Haven: "In 1883 I went from Aiken, S. C., to Asheville about the 20th of April, and was pleased with the change. The mountain air there is tonic. The winters at Asheville are a little too cold, and the clay mud in the drives at that season is something fearful in places. After April 20th one can enjoy a couple of months there." Dr. J. Madison Taylor, of Philadelphia, writes: "I had suffered much from chills and fever as a boy, and was sent, when about sixteen, to the mountains of North Carolina, where I remained six months. I hunted all over the mountains—sleeping in cabins or on the ground—gaining strength every day. I only suffered a few paroxysms, then became quite freed from all trouble. I have since spent much time at Montvale Springs in Tennessee, and the Warm Springs, North Carolina. I have been literally all over the United States, and, except in Colorado, don't know a more perfect climate." Charles J. Kenworthy, M. D., M. R. S. V., Jacksonville, Fla., writes that after a severe attack of illness he went to western North Carolina last June to recu-

perate, and during three months' residence visited nearly all points of professional importance. "Asheville is a pleasant and fashionable summer resort, and presents many attractions to the tourist, but it is too cold in winter and too warm in summer for the successful treatment of phthisis. The soil is a cold, impermeable red clay. When it rains the streets are coated with a tenacious mud, and when dry, if the wind blows, the air is charged with dust. There is an absence of sewerage, and in consequence sanitation is defective; the air can not be aseptic. From my own observations and information, obtained from physicians in western North Carolina, I believe that phthisis is of more frequent occurrence than is admitted by interested parties." Dr. William Porter, St. Louis, Mo.: "My best friend, Dr. Barrett, and his only son, both lost their lives there (Asheville) during the past summer from acute dysentery; but there was no great number of cases reported, as far as I know, in the vicinity." Dr. C. F. Folsom adds to his statistical report: "It is difficult to get good accommodations for keeping warm in cold weather; it is sometimes very cold. My patients were directed to buy small farms (two farms were bought) and prepare their houses for the cold weather, and get their own supply of food. I think that the desirable places for residence should be picked out. I am told that the new hotels are first-rate, but I have told my patients, whose cases looked desperate when they went there, to keep in the air away from other sick persons, and the improvement has been very great." Dr. H. O. Marcy, in a letter dated October 23, 1886, writes: "I have had no occasion to change my views since the publication of my paper. I have continued to have representatives in the section to date—invalids in varying conditions. The average boarding-house furnishes a less desirable home than at the North." Dr. Chaillé, who passed from three to five months annually in this region during the years 1873, '75, '76, and '77, in his pamphlet above referred to says (page 6), in regard to the immunity from consumption: "My direct evidence as a practicing physician is limited to the neighborhood of the Warm Springs, on the French Broad River, and some nine hundred feet lower than Asheville. Though often consulted by the resident population, I have never seen but one case of consumption, this in a mulat-



tress not a native of this section. My hearsay evidence is more extensive, yet I have never heard of but two other deaths by consumption in this neighborhood; these were of a younger brother and sister, in whom the disease was said to be hereditary and whose family had not long been resident in the region. I have made repeated mountain excursions in all directions, and from twenty to sixty miles distant from Asheville; everywhere I was assured of the comparative immunity from consumption of all this section, and in most places my informants denied that the native residents ever died of the disease." Dr. Marcy, in his pamphlet on "The Climate Treatment of Disease, Western North Carolina as a Health Resort," quotes from a recent letter written by Dr. Oliver Hicks, of Rutherfordton, N. C.: "My observations and the opinions I have formed are based upon a large practice for twenty years. I can show you sons and daughters of ancestors who came to this country and died from tubercular phthisis. Many of them are far past the meridian of life and are in good health, with fair prospects of attaining to ripe old age. The grandchildren of these ancestors are in all respects healthy, and are entirely without indication of tubercular or strumous cachexia."

*Summary of Replies.*—1 and 2. The number of patients referred to by Dr. McGill, Dr. Battle, and Dr. Gleitsmann of course include many, and perhaps the majority, of the cases sent by the other physicians. 3. The general opinion is that the spring (when mud is gone), summer, and autumn months, even to Christmas, are the most favorable seasons, and that January and February are the most unfavorable months. 4. It is generally agreed that a prolonged residence is beneficial. 5. Many recoveries are reported. Dr. Gleitsmann gives a striking report of sixty-four cases decidedly improved of eighty-six cases of incipient phthisis. 6. The answers indicate the lasting benefits of an Asheville residence. 7. As would be anticipated, the improvement has been chiefly in the early stages, but some striking benefits were experienced in unpromising cases. 8. Good effects

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are reported upon all the symptoms of phthisis noted 9. The replies are worthy of notice. Dr. Chaillé reports in one case the ill effects of the town residence. 10. The majority report great immunity from phthisis among the native residents. 11. Only one case of pneumonia and bronchitis originating in Asheville reported to become phthisical, and this patient recovered completely. 16. All the replies indicate that sleep is favored by this climate. 17. Regarding the diseases patients have contracted in Asheville, diarrhœa, dysentery, and typhoid fever have been noted, a warning to the town authorities. No malaria reported, and the advantage of this region for its treatment indicated.

*Personal Observations.*—Our visit to Asheville was made in September, during a heated period which was quite general, the temperature, however, being lower and less oppressive than in New York. We arrived just after a shower, which gave us a slight indication of the mud-forming possibilities of the reddish clay. The surface is so uneven, however, and the fall to the river valley so great, rendering surface drainage very rapid, that but comparatively little moisture is retained, excepting in winter and spring from frozen ground. The hotels, with one exception, are located in the central, business portion of the town, and are surrounded by stables which abound. "The Battery Park," a new hotel, is located on a hill overlooking the remainder of the town, and commands extended and charming views in all directions. The hotel is large, attractive, and well appointed; it is to be kept open for winter visitors; many of the rooms are provided with open fire-places. The principal piazza, facing southwest, is to be inclosed with glass. It has a delightful situation, but is too exposed to the northerly winds for invalids in winter, the mountains being perhaps most distant in this direction, permitting a full sweep across the plateau. An objection to the hotel arises

from the use of soft coal for large furnace-fires, the smoke and soot from which are sufficient to soil the linen, and, what is most important, contribute to the contamination of the atmosphere of the town and immediate vicinity. As purity of air is the first and great condition of a health resort for phthisis, it naturally follows that the town is not the proper place for our patients. This is particularly emphasized in Asheville on account of the absence of sewerage with a considerable population, the presence of many stables in the center of the town, dust in summer, deep mud in winter, etc. Phthisical patients should, therefore, not remain in the town. Several boarding-houses were pointed out to us in the suburbs which, from their size and neat appearance of the houses and grounds, betokened comfort, and indicated more suitable places of abode for invalids than the public houses. While we lay strictures on the town for invalids, we must commend the region in general. The quality of the air was found stimulating and sustaining. Our personal experience showed that persons entirely unaccustomed to the saddle can at once spend hours every day on horseback without the slightest sense of fatigue or subsequent lameness, and with greatest delight, in the exhilarating mountain air and the noble and varied scenery. There are many coves near Asheville, and abounding in western North Carolina, where protection can be found from the cold winds, the northerly being the severest in this section. We were enabled to make a practical test of this point, as a marked change of temperature occurred, with a cold, north-west wind, during our visit; and we investigated the environs of Asheville on horseback for this purpose, and found a great protection and freedom from wind under certain ranges of hills. There are some pine groves near Asheville that also afford excellent protection. Some of these coves are well situated for the location of sanatoria such



as some of those in Europe that have earned so good a reputation. The soil is mostly red clay, sandy in some parts, as along the shores of the Swannanoa, near Asheville, and gravelly, more especially farther westward, in the Balsam Mountains. The mountain coves have generally a rich loam. The Ducktown (or Southwestern) branch of the Western North Carolina Railroad passes through a most picturesque country, and makes easily accessible for the tourist some of the grandest mountain scenery on this continent. We were especially impressed with the apparent suitableness of the vicinity of Balsam Pass (3,400 feet above sea-level) for a sanitarium. Waynesville, Pigeon River, Clyde, and other stations on the Ducktown branch, are desirable sanitary locations. "A certain harmony existing between the patient on the one hand and the social and physical conditions of the health resort on the other, is in most cases a powerful auxiliary." We regard the vicinity of Asheville for this reason as a more suitable resort for the greater portion of the year for ladies than the majority of health resorts in this country. For an all-the-year climate this region offers the best combination of conditions we know short of the Rocky Mountains and the Southwest, and the most accessible and feasible place to send a majority of our Eastern patients. While it might be most desirable for some patients to spend January, February, and March among the pines in the elevated sections of Georgia, or other southern and milder climate, still we are convinced that many do perfectly well here throughout the year. This richly wooded country, with the numerous coves already mentioned, furnish many sheltered winter locations. We have in this report, for convenience, spoken of Asheville to commend its vicinity only as a part of the elevated plateau to which it gives access. Various avocations, other than farming and tobacco-raising, are successfully engaged

in, such as bee-keeping and grape culture. We would again call attention to the recommendation of Dr. Folsom to his patients to secure their own houses, etc., which advice we shall give as we have occasion; and we would emphasize the necessity for a prolonged residence to effect cures in this sparsely inhabited region, which permits and invites almost unlimited roaming—differing greatly in this respect from all other Eastern mountain resorts. Asheville is reached in twenty-nine hours from New York by rail.

It remains to express our acknowledgments to the following books and pamphlets from which we have freely quoted, and in which will be found indices of nearly, if not quite, all the literature of this region:

1. "Western North Carolina as a Health Resort," by Dr. J. W. Gleitsmann, 1876.
2. "Climatotherapy of, and the American Mountain Sanitarium for, Consumption," by Dr. Stanford E. Chaillé, 1876.
3. "Biennial Report of the Mountain Sanitarium for Pulmonary Diseases, 1877," by Dr. Gleitsmann.
4. "The American Mountain Sanitarium for Consumption at Asheville, N. C.," by Dr. Chaillé, 1878.
5. "The Climatic Treatment of Disease: Western North Carolina as a Health Resort," by Dr. H. O. Marey, Boston, 1885.
6. "Reference Hand-book of the Medical Sciences," article on Asheville, by Dr. Huntington Richards, 1885.
7. "The Heart of the Alleghanies, or Western North Carolina," by Ziegler and Grosscap.

Very pleasing descriptions will be found in "Nature's Trundle-bed of Recuperation," by Hinton A. Helfer, and every one who contemplates visiting this region should read "Land of the Sky," by Christian Reid. A useful list of boarding-houses and prices will be found in "How to Reach the Resorts of Virginia, North Carolina, and Georgia," published by the Richmond and Danville Railroad.











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